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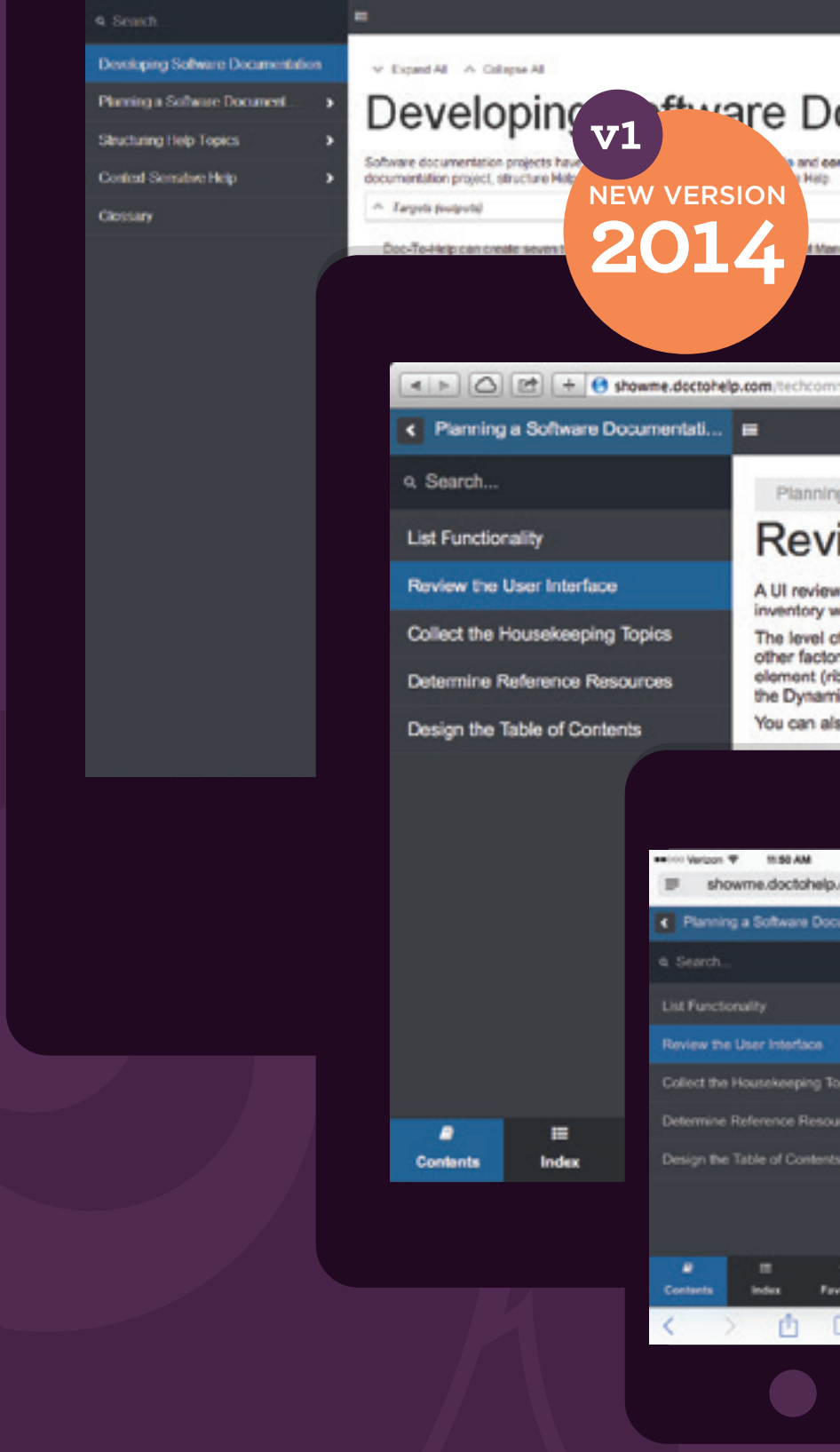

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By Alyssa Fox
By eliminating comprehensive book-based documentation and focusing their content on a new model—providing the right content at the right time to the right people—the author's organization improved the user experience, interface, and the quality of the content they provided. Targeted content does not mean less work, however; it requires more research, knowledge of users and their goals, and more time to write. And that's job security for technical communicators!

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By David Gardiner
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the main user interface, showing overall concepts, tasks, and quick links to reference information. SVGs offer considerable potential as an enabling technology to develop rich media content by restructuring conventional Web documents into fragmented, task-based procedures for better user experience.

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A Note from the Editor

I AM PLEASED to announce the 2014–2016 *Intercom* Editorial Advisory Panel (EAP) who will assist me with the editorial direction of the magazine for the next two years.

Liz Herman (Chair) has been an STC member since 1997 and works in Battelle Memorial Institute's Health & Analytics Business Unit. Her job involves transforming complex healthcare and program management information into accessible business intelligence. She received a PhD in knowledge management from Walden University and holds a graduate degree in English from Iowa State University and an undergraduate degree in journalism from the University of Iowa. She is PMP and CPTC certified and is active in STC's Washington, DC–Baltimore chapter.

Also CPTC certified, Beth Agnew spent 10 years in telecommunications with the Canadian Armed Forces. Subsequently, she started her own communications consulting business and maintained that freelance practice throughout other technical communication employment and contract positions. Beth is an STC Associate Fellow, has served as the MarCom SIG manager, International Summit Awards judge, and has been a speaker at a number of STC Summits. She is a full-time professor and the coordinator of the Seneca College technical communication post-graduate certificate program.

Barrie Byron is an award-winning information developer for software products with more than 20 years of professional experience. A technical communication professional with a keen interest in new technologies and tools, Barrie is an STC Associate Fellow, past president of the STC Palm Beaches Chapter, and frequent speaker, volunteer, international STC Summit judge and team lead, and mentor.

Alan Houser is president of Group Wellesley, Inc., a Pittsburgh, PA–based company that provides technical writing, content management, and training services to technology-oriented businesses. Alan holds an MA in professional writing and a BS in electrical engineering from Carnegie Mellon University. Alan is an STC Fellow and a popular presenter at technical communication conferences. Alan served on the STC Board of Directors, and is a past Society president, 2012–2013.

Paul Mueller is an STC Fellow and has managed information development, usability, and graphic design teams across the United States, Bolivia, and India. He presents at conferences on technology and management topics, and he also speaks to STC chapters, youth groups, and university students about technical communication. Paul has served STC Houston in various executive and committee roles. At the Society level, Paul served as a Director and he led the *Technical Communication* Editor Search Task Force and the Strategic Program Assessment Task Force. He has also served in various STC Summit leadership roles, including Conference Chair and Program Chair.

I also want to take this opportunity to thank the outgoing panel members—Barrie Byron for her first term, and Bette Frick (Chair), John Hedtke, Jack Molisani, and Andrea Wenger. Your guidance and assistance since 2012 has been greatly appreciated!

—Liz Pohland
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The Higher Value of Targeted Content

By ALYSSA FOX | *Senior Member*

FOR MANY YEARS, technical communicators provided content in the same way—comprehensive books that described everything one could possibly want to know about the product or tool they were documenting. My organization was no different. We wrote many books that described our products and (we thought) described them well. As time went on, however, this approach resulted in large, unwieldy documentation libraries that users couldn't really use because the documentation was cluttered and didn't provide the right kind of information they needed.

After some thought—and many customer complaints—we started planning a new model for the kind of content we wanted to give users. We recognized that instead of going with the whole-hog approach, we needed to provide the right content at the right time to the right people. Though this type of content required more research, knowledge of our users and their goals, and more time to write, we knew it was the direction we needed to go.

In heading down this path, not only did we plan to improve the quality of the content we provided to our users, we expected as a team to provide more value to our organization as we expanded our skillset to include more thorough task analysis, persona definition, usability testing, and video creation.

We had several goals we wanted to accomplish by revamping the way we presented content to our customers:

- Provide a positive user experience with our products. To do that, we knew we had to offer sufficient information for our customers to use our products effectively.
- Provide high-quality content based on understanding our users and their content and format needs.
- Improve product user interfaces so that they are as simple to use as possible, are easy to figure out, and require less explanation.

Implementing such a large change to the way we wrote and delivered content required some change management

and evangelization. The entire information development team spent a lot of time meeting with other stakeholders in development, product management, and technical support to describe what we were doing and the anticipated benefits of this new model.

The benefits that we anticipated as a result of this new content model are:

- Clearer content
- Easier reuse
- More effective use of team members' time
- Reduced costs for maintenance and translation
- Improved quality
- Fewer technical support calls
- Better user experience
- Happier audience

User Documentation

Through the past few years, we started receiving many comments from customers that our documentation showed them how to do things, but not when to do them or why. So we started rethinking the way we wrote that documentation. If our customers couldn't achieve their job goals with our documentation, something had to change.

Traditional Documentation

In order to understand how targeted documentation is valuable, it's important to understand what traditional documentation is and the differences between the two. My organization had been doing traditional documentation for many years. Traditional documentation tends to document features in a product and show users what they can do with the product.

Traditional documentation values comprehensiveness, which can lead to the "everything and the kitchen sink" approach. This approach documents every possible thing one could know about the product, yet doesn't provide information on how those features help the user solve their pain points.

Traditional documentation values consistency. If you create context-sensitive help for one wizard, it's expected that you create context-sensitive help for all wizards. This level of consistency doesn't take into account the fact that some wizards might be self-explanatory and not need additional documentation.

Traditional documentation also tends to step users through everything in the user interface, regardless of how intuitive that menu option or window might be. Additionally, this kind of documentation sometimes tries to compensate for bad interface design. If usability is poor in a particular area of the product, often the project team wants the documentation to address it, rather than fixing the issue in the product.

Focusing on comprehensiveness, consistency, and the user interface results in traditional documentation aiming at the least-skilled users. In today's businesses, more IT team members are handling multiple areas that they didn't before, so they need advanced guidance, examples, and scenarios to help them manage their complex environments.

Targeted Documentation

Targeted documentation requires a solid knowledge of users, their needs, and use cases. This type of documentation takes more time to research and write, but is more valuable and provides a better user experience when they can see how our products help them do their jobs. Following a concept-procedure-reference model when writing targeted documentation helps the users learn context before following a procedure, and separates reference material from main text, reducing clutter.

Targeted documentation provides specific information when and where necessary, rather than generic information about every aspect of the product. Big-picture tasks, workflows, and best practices information help guide users in making decisions about what they are doing and why. The focus should be on the *user*, not on the product.

Extensive and relevant examples, scenarios, and troubleshooting information all provide user assistance in a way that helps them connect the product's functionality to the goal they are trying to achieve. If they can see an example that is similar to their situation, it is easier for them to understand how to use the product to work in their environment.

Finally, targeted documentation does not document the obvious or the easily discoverable. It costs money and clutters documentation to write about things that are intuitive in the user interface. If you are having difficulty determining what is easily discoverable, run some usability tests on various tasks and see what results you get.

Writing Style and Content Format

Though targeted content differs from traditional content, some tools remain the same. For example, having a style guide and considering how to write for localization are important in ensuring the content still looks like it came from one organization, despite multiple writers having worked on it. Templates for your user documentation and videos help ensure that level of consistency as well.

Consider which content formats make the most sense in various situations to ensure you are providing information to users in a logical way. Sometimes context-sensitive help is the appropriate delivery mechanism for content, sometimes putting text in the user interface directly is the right answer, and some information makes the most sense in a PDF guide.

Content Design

Keep in mind that targeted content does not always mean *less* content. It means providing the appropriate amount of content to help users solve their problems. In certain cases, you might find that you need to provide *more* information to make your users successful. In my organization, an enterprise software company, we found that many of our

customers wanted more comprehensive installation and configuration information. They were having difficulty determining where to install which components of our products and asked for examples and scenarios to help them make those decisions. They also requested additional troubleshooting information so they could attempt to figure out issues they were having on their own before having to call technical support.

Users had fewer problems with other types of information like product usage, conceptual information, and reference information. To determine what specific information we needed to provide in those areas, we did thorough task analyses to see what their top tasks were, determined how obvious or self-discoverable the user interface was around those tasks, and wherever we could fixed the user interface first before documenting anything.

Best Practices for Targeted Content

When you are ready to start with targeted content, there are some important principles to remember. Start with the minimum information a user needs to perform a task. As the writer for a product, you will know more than the user does about the product. However, refrain from adding information that may be informative but doesn't directly relate to completing that task.

When discussing or demonstrating tasks in a user guide or video, ensure you include information about why you would use a feature to perform a task with the software, and relate that information back to your users' goals. Use graphics, screenshots, and demos where they are relevant and useful. Often a graphic can describe a concept or workflow in a much better way than text can.

Assume the user has knowledge appropriate for their jobs. In traditional documentation, writers often described everything about the product, including basic information. Targeted content aims to let the user interface speak for itself and provides information for users at their level of knowledge.

Finally, get out of "book mode." In the targeted content model, consider the best format for your targeted content. Those formats might include video, context-sensitive help, books, text in a user interface, or tool tips.

User Experience

The main goal of targeted content is to improve the overall user experience. Our users want easier-to-use products, not more user documentation in book form to make up for user interface problems. Therefore, part of working with targeted content is evaluating the overall usability of a product and its associated documentation and seeing where we can improve.

One of the ways we decided to help improve the user experience was to begin doing usability testing on various tasks users need to perform with our products. We follow the method described in Steve Krug's book, *Rocket Surgery Made Easy*. This method of usability testing is inexpensive and can be done quickly, and still gives you great results on how you can improve the product so you don't have to document around usability issues.

The writers also assist developers with user interface text and screen flow. Working in an agile environment encourages the team to work more closely together each day and communicate more to streamline activities like this throughout a sprint, rather than having to go back and change interface strings after they have been coded. The writers also assist in writing error messages. Any time you can keep users from making a mistake—or guide them in what to do next if they do make a mistake—their user experience is improved.

Entering usability bugs and pushing back on the project teams when they try to fix user interface problems with documentation also help guide the development team to thinking more about usability. As we work through these issues with the developers, we are constantly thinking about how to improve the user interface so that less documentation is required and how we can design new user interfaces or help systems so that every window does not require a help topic.

Converting to a Targeted Content Model

Prior to actually making the switch from traditional documentation to targeted content, it's a good idea to evangelize the new model to all of the stakeholders in your company so they understand the upcoming change. The fact that it is a significant change means you will have varied reactions from your project teams, so be prepared for that. Ensure that you can support your decisions to those people who don't understand what you're doing and why. Gaining buy-in from your user advocates, such as product managers or professional services teams, will help you in your attempts to convince others of the benefits of this model. Recognize that this change will not happen overnight, and continue to communicate and over-communicate the plan and its anticipated benefits.

Converting to a targeted content model includes several steps. The steps my team uses are as follows:

1. Define your users. Knowing who your users are and their pain points are essential to targeting content toward those users. Continually clarify user descriptions, personas, and use cases. Keep in mind that you are not your user. There are several ways you can gather information about users:
   - User definition meetings with user advocates (product managers, technical support, professional services, and sales engineers)
   - Customer forums
   - Technical support sessions
   - Sprint demos
   - User conferences
   - User comments on online documentation
2. Conduct a task analysis to define the top tasks that your users perform at their jobs. Think about what problems

your product or solution will solve for those users and the core tasks the user wants to accomplish. Ask yourself the following questions:

- What are the essential tasks the users must do? These tasks are the ones you want to focus on when targeting your content.
- What are the important but nonessential tasks? These tasks are not top priority for documenting.
- What top user goals can you base your core tasks on? These goals should not be based on product features.
- What tasks are discoverable by the user? Don't document these tasks at all.

3. Build your targeted content plan. Ensure your plan includes the following considerations:
   - Do not build the plan based on current content structure. Start from scratch to think about what information the users really need.
   - Address the main areas for which your users have requested more information. Additionally, determine the best format for various pieces of content, such as video, user interface text, or user guide.
   - Work usability testing into your plan. The easier the product is to use, the less content you have to write or demonstrate in a video.
   - Determine what existing source material fits into your new plan, what needs to be rewritten, and what outdated or obvious information you can remove.
4. Review and refine the plan, using the following steps:
   - Review your plan with your manager to gather feedback on content organization and deliverable formats.
   - Review your plan with project stakeholders to ensure the plan addresses top user needs and to gain buy-in for the change coming up.
   - Incorporate feedback into the plan.
   - Create a schedule for incrementally building targeted content into existing documentation sets over multiple releases, adding additional types of content where necessary.

Higher Value and Happier Users

Throughout the exercise of defining, evangelizing, and implementing the idea of targeted content in my organization, it has been widely recognized that our information development team provides more value to our users and our organization with this model. We have successfully migrated from the traditional approach to the targeted approach for the content for several of our products and have seen customer satisfaction rise with the new content we are providing them.

Usability testing has been a huge eye-opener to our development teams and really spurred them to make significant usability changes in our products as a result of those tests. We continue to offer those as an option, and most of our teams want us to do more of these tests than our workloads allow. Therefore, we are now teaching others in the company how to moderate those usability tests, raising our team profile. It is now widely known throughout our organization that we do more than "write books," and we are contributing significantly to increasing the quality and usability of our products.

Usability testing has been a huge eye-opener to our development teams and really spurred them to make significant usability changes in our products as a result of those tests.

Delivering our targeted content in multiple formats by adding videos to our deliverable formats is getting a lot of buzz too. Our users have been asking for videos for a while to show them how to perform the more complex tasks they must do each day in their jobs, and we are happy to be able to start delivering those. Having videos and interactive software simulations as part of our targeted content plans shows the rest of the organization that we can learn new tools and expand into new offerings, thus increasing our team members' value in the organization while also addressing user requests.

Finally, the targeted content model pleases our users—and that's our top goal. It's easier for them to use our products when they are intuitive and usable. It's easier for them to use our products when they understand why they should do something with the product to help them solve their problem. It's easier for them to use our products when the documentation is not so full of extraneous information they can't find the bits they actually do need. And it's easier for them to use our products when they have examples and scenarios that are relevant and similar to their situations. Delighting our customers in this way makes it easier for them to do business with us, and that's the most important thing.

ALYSSA FOX *is director of information development and program management at NetIQ Corporation in Houston, TX. She is a member of Customer Experience Professionals Association (CXPA) and User Experience Professionals Association (UXPA). She is also a senior member of STC and is currently serving as the STC Secretary. Alyssa speaks at numerous international conferences about various management, agile, and technical communication topics. Find Alyssa on Twitter* @afox98.

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How to Design Documentation WITH Users in Mind

By DAVID DICK | *Fellow*

WE ALL HAVE IDEAS about how something works; better yet—we all have ideas about how something *should* work. These ideas are based on our previous experiences. When products work the way we think they should work, we can successfully use them. When products do not work the way we think they should work, we get frustrated because we cannot successfully use them. So how can writers design documentation that addresses gaps between what the user knows about the product and what they need to learn about the product to understand how to use it successfully? How do we design documentation with the users in mind?

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Let us start with a high-level view at the concept of shopping in a store. In most stores, items on sale are placed at the entrance. If you know what you are looking for, you go to that department (e.g., boys, girls, men, women, household appliances, music, or toys). You compare prices for similar products. You might ask for advice or help from a sales clerk. Eventually, you buy something or you leave the store with no purchases (see Figure 1). Or you may return an item and ask for either a full refund or an exchange (see Figure 2)—you have done this many times without problem.

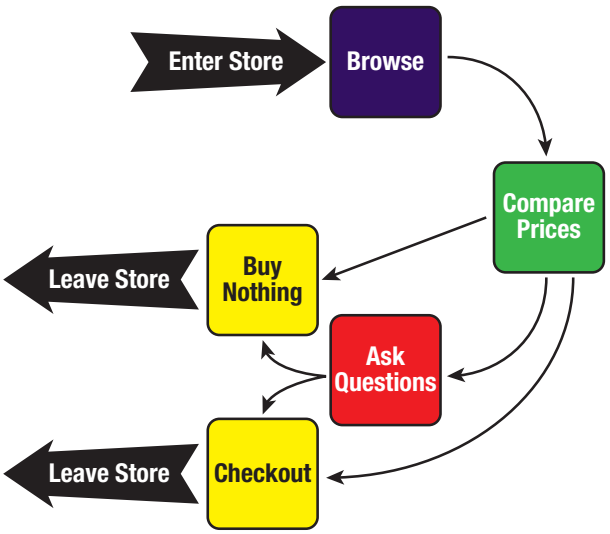

Figure 1. User's Mental Model of Shopping in a Store

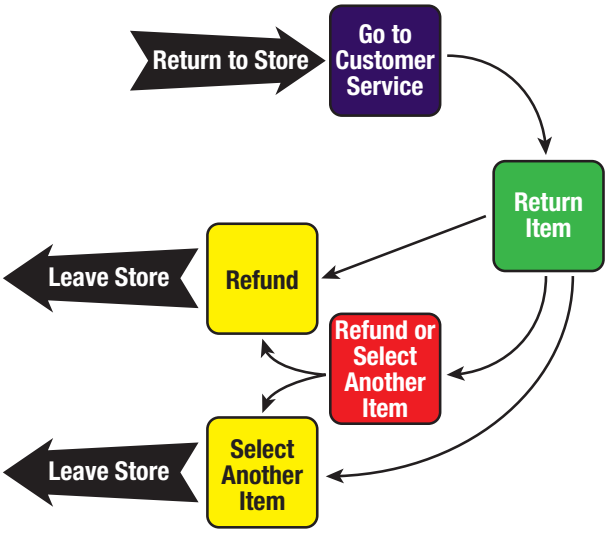

Figure 2. User's Mental Model of Returning an Item

When the consumer shops online, he still expects a comparable experience as in a traditional store; if his online expectations are not met, he will probably become confused and frustrated. There might be minor differences in the process. For example, instead of speaking with a sales clerk, the consumer will review customer comments. Instead of carrying the purchased item out of the store, the consumer has to provide shipment information for a purchase. This difference will hopefully not cause confusion, especially if the consumer has ever shopped from a catalog. However, we can't assume the consumer has experience at catalog shopping.

The consumer applies the experience of shopping (Figure 1) to shopping online (Figure 3). Figure 3 shows what the consumer understands about the process of shopping online.

Figure 3. User's Mental Model of Shopping Online

Another example is understanding the functionality of a software program, such as Microsoft Word 2003. You know the process for creating a document: start a new file, edit text, change the layout, save the file, and print. Over time, you learn other functions, including shortcuts. When you upgrade to the next version, such as Word 2007, you recognize that aspects of the software have changed (e.g., the toolbar has changed to something called a ribbon and some menu options have changed to tabs). The improvements are based on extensive usability testing and card sorting, but you don't understand the changes. You understand how the old version works. If you are a self-starter, you might search the Internet for tutorials on how to use Word 2007. Otherwise, you ask friends, family members, and coworkers for help. Eventually, you become proficient enough to accomplish everything that you used to do with Word 2003.

If someone asked you to explain the differences between Word 2003 and 2007, how would you do it? You could say: "The process for creating a document did not change, but the steps did." Another way to explain it would be: "The mental model for creating a document is the same, but now you perform the steps using the ribbon."

Cognitive psychology refers to the way we develop an understanding of how something works as a "mental model." We develop mental models by observing what happens with a process and drawing conclusions about how the process works. Interestingly, a person can possess an incorrect mental model, such as not understanding the purpose of the ribbon in Word 2007, thereby frequently

getting stuck when an old function cannot be initiated in the same way as it was in Word 2003. Technical communicators who understand the value of mental models will identify important concepts that help end users bridge the gap between a previous design and a new design for software programs.

Why We Should Care about our Users' Mental Models

Mental models are a key concept in the development of instructions, documentation, tutorials, demos, and other forms of user assistance (Nielsen, 2010). If we don't help users develop accurate mental models of how a software program is designed, then we leave users to their own devices for developing their own mental models. If their mental models are not correct, users may have problems using the program.

Another factor to consider is the differences between mental models for understanding high-level processes (e.g., creating and managing documents), as well as low-level processes (e.g., where are buttons typically located on the screen). The users may need our help to gain a clear understanding of the larger design for using the product as well as the detailed design elements.

Why Mental Models Are Important to Usability

Usability of any product is tied to the extent to which a user's mental model matches and predicts the action of a system. Ideally, an interface design is consistent with people's existing mental models about computers, the environment, and everyday objects. For instance, it makes sense to design a calendar program that has similar functionality and appearance to the notebook calendars with which everyone is familiar. As I have already mentioned, when the user's mental model does not match the design of the design of the product, the user becomes frustrated and confused.

Practical Approaches to Understanding User's Mental Models

There are several practical approaches to learning about the user's mental models.

- **Sketching**. In the very early stages of design, invite users to explain their understanding of every visual element of the product. If their explanation does not match the design or the design does not match their understanding, then you have identified possible problems that should be corrected in a redesign.
- **Card Sorting**. Card sorting is a reliable and inexpensive method for finding patterns in how users would expect to find content or functionality. This method helps you identify an overall structure for your information, as well as suggestions for explaining (and developing) navigation, menus, and possible taxonomies.
- **Mind Mapping.** Mind mapping is a visual representation of the tasks and decisions users are taking to perform a task in order to identify possible gaps between the user's mental model and the developer's mental model.
- **Thinking Aloud**. When users verbalize what they think, believe, and predict while they use the system, you can piece together much of their mental model.

Methods to Help Users Develop Accurate Mental Models

When users are struggling to understand the process for using a program, it is wise to offer them different avenues toward finding the information they need. Manuals, online help, and instructional videos can appeal to people's various learning styles, and offer multiple methods in which users can build accurate mental models of the program.

- **Marketing Brochures**. A marketing brochure answers questions about the product in a logical sequence following the reader's train of thought. The best way to start is by analyzing what users want to know, and then assess the order in which their questions will flow. A good way to organize your points is to write down the questions you think a potential reader might have and the answers your brochure might supply. This information would also appear on the product's website under "About <Product Name>."
- **User Guides**. For user guides to be useful, they need to need to be written for various readers, ranging from those with little or no experience with the product to those with significant experience with the product (or similar products). The ideal user guide identifies the important high- and low-level processes that allow the reader to develop an accurate and useful understanding of the product. If you follow the Agile methodology, then writing to the user stories can be a helpful method for organizing topics in the user guide.
- **Quick Reference Cards**. Few people want to read a book cover-to-cover when they only want to learn how to perform a few key tasks. A quick reference card gives an overview of the program and instructions on how to perform a few key tasks (e.g., create, edit, delete). The user can always refer to the manual to learn more detailed information. Quick reference cards are an ideal takeaway from any kind of training course.
- **Help**. You are likely to find help in most programs and browser-based applications. For help to be useful, it should allow users to search topics for individual tasks, as well as for patterns between common tasks.
- **Instructional Videos**. If users don't like reading user guides, the next best thing is instructional videos, which help to reinforce concepts about how things work in a visual and memorable way. Instructional videos are typically available from vendor sites and YouTube.

If your document types provide content target to a range of users, so they can develop accurate mental models about the process of using the product as well as design patterns for individual tasks, then you will bridge the gap between what the software designers intended and what the users want to do.

A good way to enhance your knowledge about writing manuals, quick reference cards, help files, and instructional

videos is to serve as a judge for your Chapter or an STC competition. What's best about serving as a judge is the opportunity to discuss your findings and opinions with other STC members. The lessons learned are priceless.

Final Thoughts

Be careful not to allow your documentation and tutorials to be a solution to poor product design. Work with designers to simplify the product. Donald Norman writes in *The Design of Everyday Things* that design should achieve the following:

- Make it easy for users to determine what actions are possible at any moment (and not possible due to constraints).
- Make the invisible visible, including the conceptual model of the system, alternative actions, and the results of actions.
- Make it easy for users to evaluate the current state of the system.
- Follow natural mappings between intentions and the required actions, between actions and the resulting effect, and between the information that is visible and the interpretations of the system state.
- Eliminate as many opportunities for error as possible.

Simply stated—the design should help the user to understand what is going on and help the user understand what to do. The design should be so well done that users do not need to rely on documentation to learn, but can make logical assumptions about how it works and build confidence and competency. This can be achieved by providing cautionary notes, notifications, and prompts.

Ideally, a user only needs to walk through a process once and commit it to memory to "keep the process simple." In the real world, however, your usable documentation (reflecting the users' mental models) will help the users to successfully use the product! i

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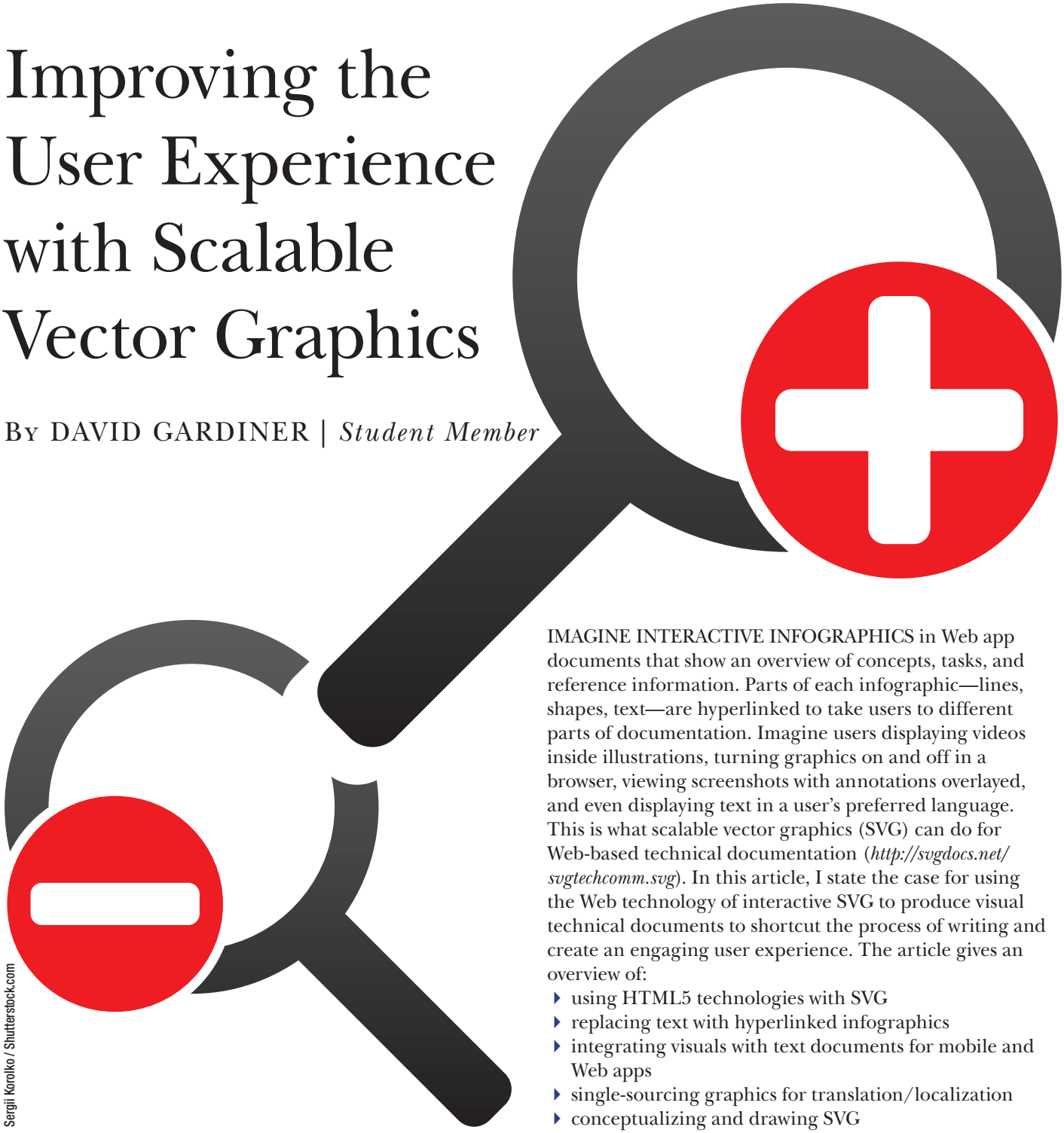
"I USED THE FREE SEMINARS AND GOT HIRED FOR MY CURRENT JOB THANKS TO STC!"
"After I got laid off last year, I decided to increase my skill set. I had already been studying DITA and content management strategy since the 2013 Summit, but now I concentrated on it. I watched every free, on-demand, archived seminar that STC offered on the topics, which gave me a solid foundation in which I could build my knowledge. Because of this I knew the right questions to ask in interviews and landed a great job."
MY NAME IS JOEL MEIER AND
I'M AN STC MEMBER

Hypergraphics for Interactive Documents:

Improving the User Experience with Scalable Vector Graphics

By DAVID GARDINER | *Student Member*



Sergii Korolko / Shutterstock.com

IMAGINE INTERACTIVE INFOGRAPHICS in Web app documents that show an overview of concepts, tasks, and reference information. Parts of each infographic—lines, shapes, text—are hyperlinked to take users to different parts of documentation. Imagine users displaying videos inside illustrations, turning graphics on and off in a browser, viewing screenshots with annotations overlayed, and even displaying text in a user's preferred language. This is what scalable vector graphics (SVG) can do for Web-based technical documentation (*http://svgdocs.net/svgtechcomm.svg*). In this article, I state the case for using the Web technology of interactive SVG to produce visual technical documents to shortcut the process of writing and create an engaging user experience. The article gives an overview of:

- using HTML5 technologies with SVG
- replacing text with hyperlinked infographics
- integrating visuals with text documents for mobile and Web apps
- single-sourcing graphics for translation/localization
- conceptualizing and drawing SVG

Web documentation is now produced for mobile devices, often with mobile-first production, and technical communicators faced with this workflow realize a need to develop "visual literacy" to create effective graphics for Web app documents. We still largely use images to supplement text, such as screenshots or photos, or even technical illustrations that are typically converted to images in their final form. But there are compelling reasons to start using SVG as an enabling technology because it's now part of HTML5, and all browsers and mobile devices can display the format.

Replacing written concepts and tasks with hyperlinked infographics, or hypergraphics, has considerable potential to improve the user experience because these act as shortcuts to understanding concepts, carrying out tasks, and finding reference information quickly. Hypergraphics can potentially enable documentation—presently structured as conventional, linear, book-like text—to be fragmented into very small topics yet still accessible using graphics as the interface for finding information. It also opens up technical communication to best practices in Web and mobile design, because succinct visuals linked to small topics convey more meaning and grab the attention of users who now expect an interactive experience akin to using smartphones.

Writing documentation can be onerous due to the time it takes to craft comprehensible text, which ultimately gives many users superfluous background information. Users expect fast learning and quick answers, so presenting small and disparate Web topics that are linked through visuals can begin to satisfy those needs. The idea of sketching documentation might also come more easily to new technical communicators used to a world of visual information—the thought of learning how to write all documentation may seem archaic.

To demonstrate how a visual interface to Web documents might look, Figure 1 shows procedures in a hypergraphic, represented by arrows between infographics (main tasks) that are hyperlinked to other explanatory infographics.

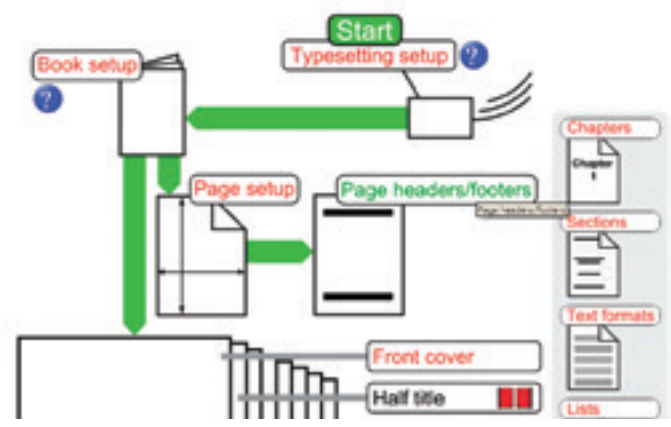


Figure 1. Hypergraphics document interface showing procedures.

Hyperlinked infographics can resemble the product or service being documented, and users can touch parts of graphics for more information about features. Technical communicators can design a visualized document structure around intuitive point-and-click actions instead of structured searching and reading. This experience has previously been available mainly with Flash multimedia presentations (think of touch-screen kiosks), but SVG and browsers now make it possible with far simpler tools—it is an enabling technology for media-rich documents.

The Case for Hypergraphics

Technical communication practice is still wedded to the idea that infographics are static representations of concepts or processes that technical documentation explains and summarizes—diagrams that are merely meant to be viewed to help a user understand complex systems. The best knowledge we have to portray visual information so far includes the concepts of "technical comics" and data visualization.

Graphics typically presented in documents include screenshots and line drawings. This has been constrained partly by our preference for raster images or bitmapped graphics that are easy to create, and because paper documents have limitations in how graphics can be presented. But now we need to create content for mobile devices, and there is increasing use of structured authoring for single-source production of both print and Web documents. Documents are still prepared using well-established principles for comprehensible written communication—with the added extra of hypertext. There is now a timely convergence of Web technologies, as well as demand for mobile documentation, that forces a rethink about how documents need to be presented to users who expect interactivity and highly visual interfaces.

HTML5 supports SVG, which means you can display line illustrations in Web pages. Meanwhile, tablet and smartphone operating systems have developed sufficiently so that all mobile devices and browsers can now display SVG. Michael Opsteegh, in the context of visualizing data, says that infographics can persuade the audience, and that readers tend to rely on information conveyed by infographics rather than any accompanying text. So making the connections between these technologies and user expectations leads to an inevitable need for hypergraphics that enable visual-first and mobile-first documents.

Replacing Text

The trend toward mobile technology is accompanied by research into user experience (UX) and usability assessment, where users of products and services drive the development of user interfaces so products are easier to use. While these techniques are used in developing products for markets, they aren't typically applied to test the usability of documentation. What if the technical communicator could create Web app or mobile documentation where infographics are hyperlinked, so that a user *needs* to tap on them to get to information, or to step through visual procedures instead of reading them in a sequence of images or lists? That sort of experience makes

infographics more meaningful because a user must interact with the documentation instead of just viewing it. Suddenly, it is more worthwhile drawing sketches because they are now integral to the document interface—so graphics are no longer just for passive viewing.

As Alan Porter has stated, we need to consider how users would experience technical graphics. Visual explanations must present users with clear and meaningful visual information in one place, and which provide consistent structure and navigation. Hypergraphics meet these needs by employing best practices in Web usability. They must be styled simply enough to convey sufficient information, and no more than that. Technical hypergraphics should not overuse Web styling simply to look enticing—otherwise the technical communicator runs the risk of spending additional time producing Web styles that don't mean anything to the user. There is an overwhelming need for minimalist design because the ultimate aim of hypergraphics is to quickly convey information to the user (such as no more than two clicks away) and to provide a stepping-off point to more detailed explanatory text.

Integrating with Web Documents

One example of how hypergraphics work is a Web app documentation product, cop-e-boox™—a bundle of customized publishing stylesheets to produce ebook formats from XML content (*https://sourceforge.net/projects/copebooxstylesheets/*). This makes extensive use of SVG hypergraphics that users can tap on to find features in text-based stylesheets. The hypergraphics resemble the *end product* of setting up styles for book layout—they are formatted as pages of a book and users tap on navigation icons to skip to different parts of a book to find features they want to set up. There are options to start viewing documentation as infographics in a browser and then link to text, or to open text-based help documentation as a Web app then link to descriptive hypergraphics (akin to providing separate novice/expert tracks for navigating documents). Because the hypergraphics are designed to resemble the end result of the product or service being documented, it is quick to find features with minimal navigation as the design is intended to be intuitive and self-explanatory. Long passages of text aren't required if visual design is user-centric.

When you hover the cursor over a graphic, it changes color because the graphics have cascading style sheet (CSS) styles embedded—user feedback for 'mouse over' events works the same as for hypertext. Graphics have alternate text that appears in popup tooltips—the same as for images in Web pages. Tapping on any graphic (lines, shapes, text) can open a new browser window, which has further instructions about that feature. Figure 2 is part of a hypergraphic in WebHelp, which shows selected text highlighted in green and a popup browser window with reference information.

In this documentation, concepts are described in conventional written WebHelp pages (e.g., what XML mark-up to use). Tasks (such as how to interact with the hypergraphics using mouse-based zoom and pan) are outlined in a single infographic that shows the structure of software components. Other hypergraphics essentially act as entry points to reference information (what book styles to set up in stylesheets and how to specify values)—these might be the visual equivalent of summary tables. The reference information is presented in very small snippets as

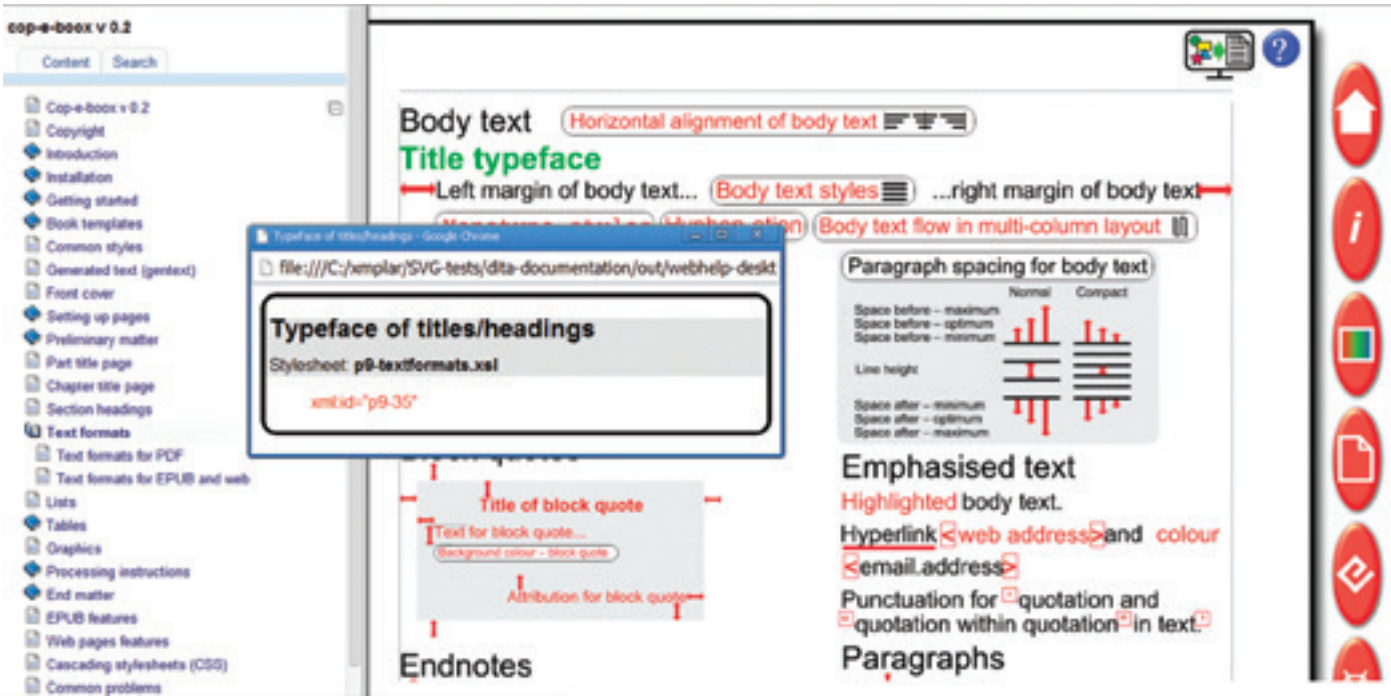


Figure 2. Hyperlinked reference information in an online help document.

HTML files (first presented as infographics, then with links to explanatory text) that the user can dip into quickly.

While there are infographics that appear with minimal text in each SVG file, the overall design is based on the product that a user would create or use. Another aspect of this design is that much of the reference information is highly fragmented as stand-alone topics. Hypergraphics can link to very small Web files containing only as much information about each feature as a user needs to know. This circumvents any extraneous information about other features, so a user is not confused and slowed down by lots of superfluous detail about other features or functions (as might be found in conventional summary tables).

Applications

Because conceptualizing and drawing visual documents is a cost in the time it takes, there needs to be a benefit so that hypergraphics are a feasible part of the documentation workflow. Apart from creating a more engaging user experience that shows only relevant task-based information, hypergraphics can fill gaps in delivering content.

An obvious application is for translation and localization. SVG mark-up has the clever feature of being able to display multilingual text in a browser. During document production, a translator can type translations into an SVG file using a text editor and special coding in the mark-up specifies the language of each piece of text. As the end result, when a user viewing the graphics sets their preferred language in browser preferences, the browser interprets this coding and switches languages. In a way, this is "single-sourcing" graphics—a technical communicator draws infographics once, and adds multilingual text to "reuse" the visual content depending on how a user chooses to view it. It means there is no need to create multiple images for each language when producing graphics.

It's also possible to put Web content inside an SVG graphic. For example, HTML-based summary tables can be added next to visuals where explanatory text is needed. This capability also means that a user can view embedded videos next to graphics, which has benefits for presenting e-learning material. A more simple application could be to put icons on the first page of complex online documents and create "quick links" to frequently accessed pages. This mitigates the need for users to first become familiar with the structure of text documents before they are able to find what they really need.

Styling infographics

SVG has a lot of capability for styling graphics, because CSS styles as well as SVG styles (filters) can be applied to hypergraphics in a similar way that they are used to style objects in Web pages. It would be easy to get carried away styling text, lines, and shapes in attempting to present a sophisticated, glossy user experience that one might have when using software or apps.

Don Moyer warns against using special visual effects in depicting sketches, as they overshadow the structure of the story that visual explanations are meant to convey. This is certainly the case when confronted with the plethora of styles and animations that CSS offers. The technical communicator needs to limit styling to what actually conveys meaning and understanding. A user will still only look briefly at an infographic, then tap on it to find information.

Software and Skills Needed

Technical communicators can use standard illustration software such as Adobe Illustrator to draw graphics then export them as SVG. There are also specialized open-source SVG editors such as Inkscape, which lets you add hyperlinking to any graphic element. With sophisticated text editors, one can set up and add CSS styles to graphics and even embed JavaScript coding so that when a user taps on a graphic, a browser window opens with more information.

Hypergraphics combines the principles of Web design and information design. Conventional infographic design plays a large role and has well-established techniques for visualization. But extending the concept to where the design process restructures written documentation into fragmented and modularized visual-first interfaces means also including aspects of data visualization (which is increasingly using interactive SVG), designing for user assistance and usability assessment.

The challenge lies in conceptualizing visuals and making the design relevant as entry points into documentation. Technical illustrators can play some part, especially where they routinely design more complex illustrations as part of conceptualizing products. Yet, as multi-skilled technical communicators, we need to build on our strengths in managing production by integrating those designs into documentation—structuring, hyperlinking, and styling to ensure accessibility and usability for good user experience. By producing Web documents, we already have gained many of the skills in mark-up languages to start creating hypergraphics. We now need to apply our skills in new areas to create value-added documentation. i

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Automating the Conversion Process:

A Tale of Converting Legacy Content from QuarkXPress and Macromedia Freehand to Adobe InDesign and Illustrator

By TOM BALLARD

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Software Standards

Frequently in technical communication circles, we hear about the "industry standard" in software. For many of us, the "standard" is Adobe FrameMaker or MadCap Flare. For others, it's Adobe InDesign. For yet others, Microsoft Word is the software of choice. Different tasks require different software, and depending on what we need to do, other standards may include Adobe Photoshop, Illustrator, DreamWeaver, Muse, or even Flash, to mention a few. And if you do occasional freelance like I do, you may get an unusual request to use something like Microsoft Publisher. Regardless of what our clients or we personally prefer, there tends to be one widely accepted software for most tasks.

But what do we do when an "industry standard" changes as software evolves or new needs arise?

During my time as a technical writer at ICON Health & Fitness, Inc. (based in Logan, UT) in a manuals department, I gained a lot of experience with converting legacy format content. We had created thousands of manuals using QuarkXPress and tens of thousands of line drawings using Macromedia Freehand over the years. Sometime during 2010, our department realized that the industry standard

had shifted to Adobe InDesign and Illustrator for doing the type of work we did. We had Adobe Creative Suite 5 (CS5) installed on all of our computers, but because all of our files were still in Quark format and we still had pressing deadlines, we continued working in Quark for several more months. Finally, during our "slow season," we realized we needed to come up with a plan to begin the conversion process.

The Problems

Converting tens of thousands of files of legacy format content usually calls for conversion software. Enter Q2ID by Markzware, a software specifically created to convert QuarkXpress documents to Adobe InDesign format. Q2ID does a decent job of converting object frames, text boxes, guides, lines, and even text formatting from Quark to InDesign. However, we quickly discovered that the conversion process is not flawless. Many object styles and formatting options that work well in Quark do not work as well in InDesign. For instance, in Quark all text boxes have a 1 pt. inset spacing, but InDesign allows for no inset spacing. Many elements in our manuals had similar conversion issues, such as changes in alignment, text formatting, and object styles.

InDesign simply had more options that we soon realized we wanted to implement. For instance, we were using square-ended callout lines in Quark, but InDesign allowed us to use rounded ends for a cleaner intersection between two lines at an angle. We had used a spread format with the back cover and front cover on one spread and then each page alternating (40/1, 2/39, 38/3, 4/37) so that we could print the manuals on 11 x 17 paper double-sided. InDesign's print booklet feature does this automatically, so we decided to change our format to single page so that we could work with pages individually. Quark's system for creating master styles had been difficult for us to implement, but we found that with InDesign we could create and implement text and object styles more uniformly and efficiently.

Suffice it to say, there were a lot of changes to be made to each manual that we duplicated and worked on. Even though they were in the new InDesign format, there was still a lot of work to be done to get each manual to look the way we wanted in InDesign. We spent months converting each document manually, dragging an overset text box here and applying an object style there, applying text styles to be used in the table of contents (a feature that we started using with InDesign), and applying a master page for automatic page numbering. Eventually we realized we were repeating many tasks with every manual we converted. And where there is repetition in the conversion process, there is room for automation.

Our Solutions

Enter AppleScript. Because we were all using Mac computers, AppleScript worked on each of our machines. We had used AppleScripts in the past for common operating system tasks, such as renaming files. Now we had a challenge that presented an opportunity to create a software-specific AppleScript. We contracted a freelance programmer to write an AppleScript that automated the conversion process from Quark to the point where we had only a few changes to make to our documents after converting them. The AppleScript changed the page layout to single pages, applied the rounded ends to all callout lines, eliminated all 1 pt. inset spacing, applied our master page with automatic page numbering, and relinked all of our images from the Freehand files to the new Illustrator files.

And speaking of Freehand and Illustrator, AppleScript ended up helping us immensely there as well. The process to convert a Freehand graphic to Illustrator format did not require new software, but it did require some work. We had to save each .eps file as a Freehand 9 document, open that new document in Illustrator, and then paste it into an Illustrator template that we had developed where it could be saved as a .ai file. We used the same freelance programmer to write an AppleScript that automated this process as well, which allowed us to simply select all of the images we wanted converted, open the AppleScript, and watch as it would go through this conversion process for each file. The AppleScript still took a while to run, especially with our library of tens of thousands of images; however, we simply let it run overnight a few times. Needless to say, this also saved weeks' worth of work.

There Is Hope

You may be thinking, "Well, that's great that you found a solution for your legacy format conversion problems, but my situation is quite different." While that's fair, I have seen that there are multiple solutions to many of the problems we encounter with format conversion as communicators. Whether your "standard" is FrameMaker, Flare, Word, DreamWeaver, Muse, WordPress, or something else, there are bound to be solutions for your situation. We initially despaired that we would be using Quark for years even though we owned InDesign, simply due to the time-intensive nature of the conversion process. Now, we are almost strictly using InDesign and Illustrator for all of our projects, and when the occasional request for an old unconverted manual comes up, we can still use Q2ID and our AppleScripts to quickly turn it around.

So even if you've been using Publisher for PC and you need to convert to InDesign CC for Mac, there are ways to automate the process. You just need to look carefully, not get discouraged, and perhaps hire a freelancer. But trust me when I tell you, speaking from experience, that automation almost always saves more time and money than you'll waste copying and pasting every file you own.

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STC Communities, Staff Earn APEX Awards

FOUR STC COMMUNITIES and members of the STC staff recently were named winners in APEX 2014, The 26th Annual Awards for Publication Excellence. APEX Awards are based on excellence in graphic design, editorial content, and the ability to achieve overall communication excellence. APEX Grand Awards honor the outstanding works in each main category, while APEX Awards of Excellence recognize exceptional entries in each of the individual categories. Congratulations to the following STC winners:

- Carolina Chapter (Rick Sapir): APEX Award of Excellence in the category of Newsletters – Electronic and Email
- Northeast Ohio Chapter (Lisa Mileusnich, Lynn Nickels, Jeanette Evans): APEX Award of Excellence in the category of Newsletters – Electronic and Email
- Technical Editing SIG (Rick Sapir): APEX Award of Excellence in the category of One to Two Person-Produced Websites
- Washington DC-Baltimore Chapter (Cynthia Lockley): APEX Award of Excellence in the category of WordPress Sites
- Willamette Valley Chapter (Valerie Ball and Carol Larson): APEX Award of Excellence in the category of Newsletter Writing
- The 2012–2013 *STC Salary Database*, written by Rick O'Sullivan, APEX Award of Excellence in the category of One-of-a-Kind Custom-Published Publications
- And last but not least, STC Media Manager Kevin Cuddihy received an APEX Award of Excellence in the category of Blog Content (with a huge assist from and a thank-you to all the guest bloggers)

Congratulations to all the winners! For more information on the APEX Awards and a full listing of winners, visit *www.apexawards.com*.

Presenting Research: The Student Poster Competition

BY SALLY HENSCHEL | *Senior Member*

PRESENTING RESEARCH IS a critical, valuable component of a student's educational experience. A student research competition provides students a venue in which to share the culmination of their work and an opportunity to receive feedback from professionals in the field. Each year, the STC Academic SIG Student Poster Competition provides students just such an opportunity: undergraduate and graduate students are invited to submit innovative work in communicating technical content, producing and publishing content, researching content, or promoting the profession. Selected posters are presented at the annual STC Summit.

In Spring 2014, students submitted their research posters to the Academic SIG, who made the entries available to this year's judges: Ben Woelk, Valerie Ball, and Pam Ecker. Using a Competition Entry Assessment Form modeled on the STC International Summit Award Entry Assessment Form, the three judges reviewed, commented upon, and ranked each submission. Three top entries were selected, and the students were invited to present their posters at the Summit. Each was given time to review and incorporate suggestions provided by the judges prior to resubmitting their poster to STC, who had the posters professionally printed for the Summit. Students whose posters were not selected also received feedback from the judges and were encouraged to participate in next year's competition.

2014 Summit

On Tuesday, 20 May 2014, the three selected students—Anna Lerew-Phillips, Kevin Hufnagle, and Britta Voigt—presented their research to a packed, interested audience at the Summit. The judges and audience moved between the three students' presentations, asked questions, and offered feedback. Following the presentations, the judges met again to rank the students on their presentation and to select one Best of Show and two Distinguished award winners.

Best of Show was awarded to Anna Lerew-Phillips for her research poster "Comparing Safety Information of Class II Medical Devices and Adult Novelty Toys." Anna currently is working on her masters in English at Midwestern State University, and is a member of STC's honorary society, Sigma Tau Chi. The judges noted, "She researched a very delicate subject, summarized and supported her research with appropriate

sources, and provided a professional and thorough presentation."

Distinguished was awarded to Kevin Hufnagle for his research poster "Collecting Monuments: Creating a Mobile App for Photo Navigation Using Audience-Based Iterative Design." A May graduate of Worcester Polytechnic Institute, with two bachelor of science degrees in computer science and professional writing, Kevin started work the week following the Summit as a software development engineer, with a focus in user interface design, at ICONICS in Foxborough, MA. The poster that he presented in Phoenix was part of his Major Qualifying Project (MQP) at WPI, the equivalent of a senior thesis at most other universities. A judge commented, "The attitude of the writer is sincere and charming in his wish to benefit both technical communication professionals and their audience as users of travel apps."

Distinguished was also awarded to Britta Voigt for her research poster "Reflection of Cultural Differences in U.S. English and German Industrial Manuals." Britta is a graduate student in the masters program in technical and professional communication at the University of Wisconsin-Stout. A judge commented, "The topic is intriguing, and the poster provides useful information that illustrates the student's intellectual curiosity regarding the study and analysis of technical communication."

The awards, both plaques and gift cards from Amazon, were presented to the students at the Honors Banquet, which the students attended as guests of the STC Board of Directors.

Preparing for Next Year's Competition

Following this year's poster competition, members of the STC Academic SIG, judges, and students met to discuss the competition and make suggestions for improvement. Students said they appreciated the early, constructive feedback from the judges and the opportunity to

"Made Me Feel Like the Winner of a Jackpot"

WHAT DID THE STUDENTS who presented their posters have to say about the Summit experience? Students who present their research at the Summit benefit in many ways:

"At this year's Summit, I had a great experience. It was the second Summit I attended and even more inspiring than last year's. . . . Giving my first public speech was intended to be a challenge to overcome my stage fright and turned out to be another important stepping stone in my career path. . . . [T]he second reason why this year's Summit was so inspiring to me: the people. The conversations I had with fellow students, STC members and staff, as well as with some of our industry's leaders made me feel like the winner of a jackpot. . . . Also, some of the educational sessions I attended made me realize that I am at a crossroad in my career and gave me inspiration in how to proceed. To summarize, being able to present in the student poster competition gave me the great opportunity to further develop my career goals and to network with professionals I would have not been able to otherwise."

—Britta Voigt

"The encouragement I encountered from new and seasoned STC members highlights the best the Summit has to offer any student: confidence. I received constructive criticism from the audience of the poster presentations. Presenting on an STC platform in front of novices and professionals and receiving positive feedback leveled the feelings of inferiority I experienced."

—Anna Lerew-Phillips

"This conference offered me numerous opportunities to learn about new technologies and communication strategies that relate directly to my professional projects. The networking events allowed me to compare thoughts and predictions regarding the field's trajectory with knowledgeable, caring members of the technical communications community. I would highly recommend attending this event if you wish to gain new professional partners and newfound inspiration within the user experience, technical writing, and content strategy markets."

—Kevin Hufnagle

From left to right, Britta Voigt, Anna Lerew-Phillips, and Kevin Hufnagle

make changes to their posters prior to their Summit presentations. Judge Valerie Ball suggested that the emphasis of next year's competition be on the visual representation of information, data, or knowledge (i.e., infographics). In his October 2013 *Intercom* article, "Planning and Creating Infographics," Michael Opsteegh describes infographics as "a powerful way to persuade your audience and convey copious amounts of data in a manner that is digestible and entertaining to the reader." Academics in the conversation agreed the call for participation should go out in early Fall, allowing faculty and students time to incorporate Fall and Winter research assignments and projects into a competition entry. The Academic SIG Administrative Council has decided to continue with or adopt all of these suggestions, so in late August please look for our call for student participation in Student Research Competition for the 2015 Summit.

Share Yourself with *Intercom* Readers

WE'RE LOOKING FOR MEMBERS to contribute a first-person column for a future issue of *Intercom*. The magazine has a trio of member-focused columns: My Job (your day-to-day work), Off Hours (discussing your hobby or side gig), and Looking Back. My Job takes a look at the day-to-day work of an STC member and what makes the job interesting, fun, or unique. Off Hours is a look at the side jobs and hobbies our members have. And Looking Back focuses on senior members providing perspective earned throughout their career. Would you like to share your story with *Intercom* readers? Email Kevin Cuddihy, *kevin.cuddihy@stc.org*, for more information, samples, and to volunteer!

Associate Fellows: Complete Your Fellow Applications by 15 October 2014

BY CINDY CURRIE-CLIFFORD | *Chair, Fellows Nominating Committee*

EACH YEAR, THE STC FELLOWS Nominating Committee invites STC Associate Fellows who have held that rank for three years or more to submit an application to the committee for possible elevation to the rank of STC Fellow. This honor recognizes members' significant achievements in and contributions to the field of technical communication and sustained and significant service to STC. It is the highest honor that STC can bestow upon a member.

If you are an STC Associate Fellow who was inducted to that rank at or prior to the 2012 STC Technical Communication Summit, we invite you to submit an application to the committee. The committee thoroughly reviews each nominee's application, researches and verifies the nominee's qualifications, and contacts the nominee's references. When all evaluations are completed, the committee recommends qualified nominees to the STC Board of Directors for consideration. Those nominees receiving a two-thirds favorable vote from the board will receive the honor as long as their membership is in good standing and they meet the requirements as stated in the guidelines. (If the committee determines that a nominee is not qualified for elevation to the rank of STC Fellow, it will provide a brief explanation of why the nominee does not meet the qualifications.)

To be considered for elevation to the rank of STC Fellow, you must have accomplished all of the following: (1) performed important work and attained distinction in the field of technical communication; (2) done notable original work that has contributed to the advancement of the field; and (3) made significant contributions to the STC and helped to tell STC's powerful story. Length of career, quality of accomplishments, service to the Society, and continuity of achievement are all factors in the selection process.

You can find the application and related information on the STC website at *www.stc.org/membership/recognition/honors*. Send your completed application to the Society office at *stc@stc.org*, with a copy to Cindy Currie-Clifford at *stc_cindycurrie@yahoo.com* to arrive no later than 15 October 2014. The committee will forward their recommendations to the STC Board, who will consider nominees in January 2015. The Society will recognize new Fellows at the honors banquet in June at the 2015 STC Technical Communication Summit in Columbus, OH.

For more information, review the Fellows Committee page available at *www.stc.org/membership/recongitions/honors* or contact committee chair Cindy Currie-Clifford at *stc_cindycurrie@yahoo.com*.

Please note that there is an administrative fee of $25 that must accompany your application.

Associate Fellow Recommendations due 15 October 2014

EACH YEAR, STC MEMBERS and communities have the opportunity to recommend senior members for the rank of STC Associate Fellow. STC Associate Fellows are among the top technical communicators in our Society. This honor recognizes members' achievements in the field of technical communication, contributions to STC, or both.

To be eligible for selection as an Associate Fellow, a nominee must have been active in the field of technical communication for at least 15 years and have been a member of the Society for at least 10 years, as of the application submission deadline. They must also be members in good standing at the time of the application and at the time of the honors banquet the following May. But, most importantly, the nominee must have significant accomplishments one or more of the following areas: (1) performed important work and attained distinction in the field of technical communication, (2) done notable original work that has contributed to the advancement of the field, or (3) made significant contributions to the Society and helped to tell STC's powerful story.

Any voting member of STC may nominate a qualifying individual to the Associate Fellows Committee by filling out the nomination/application form and identifying three references. A qualified candidate may also self-nominate, however, if a candidate selects to do so, the application must be endorsed by two senior members, one of whom must be a community leader or hold an honorary STC rank. Endorsers cannot also serve as a reference for the same nominee. No member of the STC staff, the STC Board of Directors, or the Associate Fellows Committee can serve as submitter, reference, or endorser.

In August, the STC office and the Associate Fellows Committee will send a message to STC qualifying senior members and Society and community leaders describing the nomination process and the information required for a nominee's consideration by the Associate Fellows Committee. By August, this information will also available on the STC website (at *www.stc.org/membership/recognition/honors*). Upon request, the STC office will email community leaders a list of all eligible nominees in their communities. Please email your request to *stc@stc.org*. To recommend yourself or a colleague as a nominee for Associate Fellow, please use the Recommendation for Associate Fellow form and refer to the completed sample forms on the STC website.

In the October time frame the Associate Fellows Committee will review each nominee's application and contacts the identified references. Based on evaluation of the information collected, the Committee will forward its recommended nominees to the STC Board of Directors for consideration. Those nominees receiving a two-thirds favorable vote from the board will receive the honor as long as their membership is in good standing and they meet the criteria stated in the guidelines.

The Associate Fellows Committee encourages submitters to work with nominees to ensure applications are complete and accurate. Please use e-resources whenever possible so that the committee can check facts, publications, presentations, and the nominee's presence online. It is not the length of the application that will ensure the acceptance of the nominee, but the consistency, variety, and level of work and influence the nominee has had on technical communication and the Society. An online portfolio would be an ideal resource. Remember that this is an STC honor and emphasis will be placed on STC accomplishments.

The Committee recommends involving Associate Fellows, Fellows, or members who are experienced in submitting Associate Fellow applications. The Committee also *strongly recommends* that the submitter be fully convinced that the nominee meets all the criteria for recommendation as an Associate Fellow. Keep in mind that those who attain this honor serve as models of our organization. This honor is not easily attained and those who receive the honor have worked for many years to support the profession and the Society in various ways.

Completed nomination packages are due by **15 October 2014.** Send them to the STC office at *stc@stc.org*, with a copy to the Associate Fellows Committee Chair, Brian Lindgren (*BrianLindgren@aol.com*). In January 2015, the STC Board of Directors will consider the nominees recommended by the Associate Fellows Committee. In June 2015, at the annual STC Technical Communication Summit in Columbus, OH, the Society will recognize the new Associate Fellows at the annual Honors Banquet.

For more information, refer to the Associate Fellows Committee Web page at *www.stc.org/membership/recognition/honors* or contact Brian Lindgren at *BrianLindgren@aol.com*. Keep in mind that some changes have taken place over the past couple of years and the website and guidelines reflect the changes noted below.

Please note that there is a one-time, $25 administrative fee.

Nomination Process Opens for STC Academic Awards

STC RECOGNIZES individual member achievement through several award programs. Below is information on the academic award programs and their deadlines.

Sigma Tau Chi and Alpha Sigma Honor Societies

STC sponsors two honorary societies for students, and starting in 2013 the criteria for each have changed.

Membership in STX is an honor given to students enrolled in a program in technical communication, who have a cumulative grade point average of 3.5 or above, are *exemplary* in participation in STC, and demonstrate a potential for *significant* contribution to the profession.

Membership in AS is an honor given to students enrolled in a program in technical communication who have a cumulative grade point average of 3.5 or above, demonstrate *active* participation in STC, and have the potential to contribute to the profession.

Nominations are due by **1 October 2014**. Contact: Russ Hirst (*rkh@utk.edu*).

Jay R. Gould Award for Excellence in Teaching Technical Communication

The Jay R. Gould Award honors the distinguished teaching career of the late Professor Gould and celebrates true academic mentorship, demonstrated by the personal and professional concern that great teachers extend to their students beyond the classroom.

The Gould award nominating committee is seeking nominees for the award. To be eligible, a nominee must have been a member of STC for at least 10 years and must have been involved in postsecondary education for at least 15 years. Current STC board members and members of the Gould award nominating committee are not eligible.

Nominations are due by **1 November 2014**. Contact: Tharon Howard (*Tharon@clemson.edu*).

Ken Rainey Award for Excellence in Research

The Ken Rainey Award honors the distinguished research contributions of the late Dr. Rainey, a professor at Southern Polytechnic State University and an STC Fellow who produced major research studies that continue to provide ongoing benefit to both practice and teaching in the field of technical communication.

This award honors research that has made positive, significant contributions to technical communication practice and teaching. One award will be given each year to an STC member who has conducted a lifetime of quality research in the field or has completed a single high-quality empirical study or a set of related high-quality studies.

To be eligible for the award, a nominee must have been a member of STC for at least one year.

Nominations are due by **1 November 2014**. Contact: Nancy Coppola (*nancy.w.coppola@njit.edu*).

For more information on all of these awards and nomination forms, see *www.stc.org/membership/recognition/awards*.

STC, Social Media, and You

STAY CONNECTED WITH STC wherever you go! STC's Notebook blog (*http://notebook.stc.org*) includes multiple posts during the week on STC events, communities, and more. There are also regular guest bloggers on many tech comm topics. On Twitter, follow STC *@stc_org* and follow the *#stcorg* hashtag; get information about the Summit from *@STC_Summit* or *#stc15*. Are you on LinkedIn? Search for the Society for Technical Communication group, or visit *www.linkedin.com/groups?gid=2926*. And now we're on Facebook, too, at *www.facebook.com/STC.org*.

STC has started putting more videos up on YouTube as well; find us at *www.youtube.com/Society4TechComm*. And sign up for our RSS feeds, too—click the RSS icon on the STC home page, STC's Notebook, and both *Intercom* online (*http://intercom.stc.org*) and *Technical Communication* online (*http://techcomm.stc.org*). It's all part of staying connected and getting more out of your STC membership.

Twin Design / Shutterstock.com

Making Our User Experience More Lean

wavebreakmedia / Shutterstock.com

BY BRIAN STILL | *Member*

WE'VE ALL READ or heard about some of these statistics:

- Paul Ray, UX manager for Bing, estimated that Microsoft saved $80 million in revenue by relying on user research that indicated a stronger shade of blue would be more effective (*http://channel9.msdn.com/events/MIX/MIX10/CL06*).
- IBM Research estimated that for every $1 spent on usability, at a minimum, $10 in revenue is generated (*www.ibm.com/design/#costjustifying*).
- The Nielsen Norma Group (NNG), a leading usability consulting organization, found an 83% return on investment (ROI) for those companies that employed UX evaluation and design (*www.nngroup.com/articles/usability-roi-declining-but-still-strong/*).
- Eighty percent of software costs occur in the maintenance phase. Since a typical application costs 100 times more to fix when it is completed than when it is still being designed, testing early and often can save millions.

What such data tell us is that evaluating the user experience (UX)—that is conducting usability testing of real users, doing real tasks, in realistic environments, and doing so early and often—can save and make real money.

Of course, this is easier said than done for so many of us interested in integrating effective UX into the product development process, whether that's a website, a digital publication, or even software. Organizations we work for or consult with sometimes lack funding to support UX work. They often lack fundamental awareness of the value of UX. Still others employ what they call usability testing but really isn't, or at least isn't particularly valuable because it comes far too late in a waterfall development process, one that designs everything up front (Big Design Up Front or BDUF), that has strict rules of engagement on what can be done and when, and as a result typically treats usability testing as nothing more than quality assurance (QA) testing, meant to find anything problematic at the end of development, before it's too late.

Should discovered problems be fixed, the costs are exponentially higher than those that would have been incurred had they been caught earlier. As Jesse James Garrett so eloquently argues in *The Elements of User Experience*, the fact is that there is much more involved with a product and its overall user experience than just what is shown on the surface (*www.jjg.net/elements/*). The skeleton beneath it, and the structure, scope, and even strategic levels further down, all matter. They all inform an effective and satisfying user experience. Conducting a single test at the very end hoping that nothing bad will be found doesn't get us anywhere near the comprehensive diligence necessary to make a product usable.

This column examines the ways technical communicators contribute to the development of more usable products, especially those used in complex, dynamic environments. Novel usability evaluation methods and design techniques, as well as those rediscovered or repurposed, will be the focus. Please send your comments, questions, and suggestions for future articles to me at *brian.still@ttu.edu*.

And so the statistics I quoted above just keep racking up. What is to be done to integrate the user experience into the complete product life cycle? Interestingly, developers, in greater numbers than ever before, are championing a creative process meant to encourage a more solution-based, more collaborative, more Agile approach to the work they do. This Agile methodology comes complete with its own manifesto *(http://agilemanifesto.org/principles.html*), part of which includes the following principles:

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- Working software is the primary measure of progress.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Agile development has been transformational, ushering in iterative, collaborative development, saving money for companies, and promoting a legitimate alternative to the BDUF, waterfall development that once was considered the only way to make products. Still, Agile hasn't necessarily changed how companies view UX. At the end of the day, Agile was created as a means to improve how developers work together to develop. In fact, some Agile-driven companies have been as reluctant (if not more so than traditional, BDUF companies) to accept UX evaluation into their product development framework, primarily because they see UX as time-consuming and costly, or, worse yet, mysterious in the answers it portends from its elaborate methods of testing and analysis. More than once I've had managers and developers in Agile "shops" tell me they don't get UX evaluation, or they already take into account UX by including a "voice of the consumer" position on their scrum team. Working in sprints of development lasting just two weeks, they also think there's no way to that UX evaluation can be done quickly enough to integrate actionable feedback into the product development process.

Many people a lot smarter than me, Carol Barnum included, have discussed how UX is necessary to Agile development and have counseled ways to integrate it effectively. Barnum's approach is not to lessen rigor, but to rely on faster testing methods. One of which, holding what she calls "fast debriefs" at the end of every day, is akin to what Agile scrum teams do in their daily standup meetings and arguably fits well with Agile development. Barnum writes, "If we are doing two days of testing, this quick meeting at the end of the day captures things we don't want to forget during our review on the second day. If a study lasts just a single day, this meeting gets everyone together to agree on the findings and prioritize the issues the development team needs to fix. The developers, when present, walk out with their list of issues to address in the next or a future sprint. If they are not present, we send these findings, along with the logs of sessions, to everybody the same night" (*www.uxmatters.com/mt/archives/2011/04/integrating-ux-into-agile-development.php*).

Diana DeMarco Brown, who wrote a great article just last year intended to counter the many myths that keep UX out of Agile, argues that UX can and should be part of Agile, but "the key is planning. Set up a regularly occurring time to have customer feedback sessions and conduct them no matter what." In addition, DeMarco Brown writes, "Let go of the idea that you need a high-fidelity prototype or working code before you can get feedback. Schedule a session and bring what you have … and have a conversation with your users" (*www.upassoc.org/upa_publications/jus/2013may/demarco-brown2.html*).

Both DeMarco Brown and Barnum are, ironically, advocating for an Agile UX, one that can fit with Agile development and, for that matter, any organization's culture, requirements, and product development process. If we want to make it possible for UX evaluation to be deployed and deliver on what only it can do, which is speak for users through users about the usability of a product, then it has to be rigorous, but it also has to be flexible enough to find a place inside, not outside, the process.

Along those lines, I have recently experimented with another new approach to re-tool UX, making it capable of fast, outcome-driven results. Called "Lean UX," it challenges quite a few relatively bedrock assumptions about how UX is typically employed and yet still relies on core fundamentals any UXer would appreciate and expect, such as testing as soon as possible, testing with real users, and getting into the field to conduct testing (GOOB, or get out of the building). More importantly, many Agile shops like it and are incorporating it, meaning that understanding how it works may prove useful for those of us wanting to make UX evaluation viable where we work or for whomever we support with consulting services. I hesitate to offer up a definitive presentation of Lean UX. What I'll briefly here is describe my understanding of it and also discuss how I've put it into action.

The best summary of Lean UX comes in the phrase "build-measure-learn"(*www.smashingmagazine.com/2011/03/07/lean-ux-getting-out-of-the-deliverables-business/*). Rather than wait to engineer a complete design, or evaluate even a completed, low-fidelity prototype using any number of analytical methods, Lean UX encourages not just UX professionals but also developers themselves to work together, moving as quickly as possible, to generate business solutions. Rather than think about building a finished product to get feedback, developers should try to figure out what users need, hypothesize on what the best way is to deliver on that, and then test it by having real users interact with the prototype.

This prototype in Lean UX nomenclature is called the MVP, or minimum viable product, and it can be literally anything—a hand-drawn mockup, a fake button—anything that users can engage with and that provides answers for developers to be able to measure and learn whether their proposed solution actually works. Obviously, this approach is fast. It promotes ongoing discovery that involves developers working with each other to come up with business solutions, as well as developers working with users to evaluate the validity of those solutions. What will users do, want, need? Why wait until the end to see if you've guessed correctly? Build something, measure user interaction, learn from the experience, and do it again, all the while keeping to Agile or any other development schedules.

When recently I was contracted by a client to evaluate and then redesign an interface for an enterprise resource planning (ERP) software application, I initially faced some resistance when I suggested a Lean UX approach. They didn't feel like we could get understandable feedback from users unless their developers had created a fully functional, alternative interface. But I made the case that we actually could save time and money by drawing on our existing knowledge about users (based on analytics, site visits, interviews, user stories, and other data from usage of the current interface) to hypothesize on potential changes required to improve the new interface. Then, instead of picking one and building it out fully, finding out it wasn't right and having to start over, we could build out quick MVPs meant to test each one or a collective mixture of the possible changes.

Time will tell, since the project is still ongoing, if what we did has a positive ROI. Clearly, however, we were able to generate useful data from real users as they engaged with the different MVPs we created. The testing was rapid but not in any way diluted as we gathered strong verbal and performance feedback. Certainly, we were able to throw out a few of solutions we thought would work and keep and tweak those that had merit. The reasons for doing this, as a means of improving the user experience, were made obvious to the client because they could see the successes and failures unfold rapidly in front of them.

There is a lot of experimentation, like Lean UX, that obviously goes into deriving confident results from UX evaluation. Just as important, however, is the need for experimentation in finding ways to make the case for UX evaluation so that organizations see the need and the benefits for introducing it into their active development processes. The mantra: make your UX Agile.

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Twenty-fifth Birthday Timeline of the World Wide Web

BY LINDA ROBERTS | *Associate Fellow*

2014 IS THE 25TH ANNIVERSARY of the World Wide Web. To mark this silver anniversary, this column highlights some of the accessibility milestones that have occurred along the way.

1989

Sir Tim Berners-Lee invents the World Wide Web.

1996

Web Accessibility as a World Wide Web Consortium (W3C) project was proposed in a member newsletter in September. Before this, the W3C had just maintained a few Web pages about Web accessibility.

1997

The Web Accessibility Initiative (WAI) was officially launched on 6 April 1997 at the Santa Clara, CA, Marriott. The goal of the WAI is to develop and maintain guidelines about Web accessibility.

1998

The U.S. Congress amended the Rehabilitation Act of 1973 to include Section 508. This required U.S. Federal government agencies to make their electronic and IT accessible to people with disabilities. It established enforceable standards that were incorporated into the U.S. Federal government procurement process.

1999

The W3C Web Content Accessibility Guidelines (WCAG) 1.0 were published and became a W3C recommendation in May 1999. WCAG 1.0 consisted of 14 guidelines about how to make web content accessible to people with disabilities. Each guideline covered an accessibility issue (for example, using tables) and had one or more checkpoints associated with it that described how to apply that guideline to Web pages.

2006

After Google acquired YouTube, closed captioning was made available. This not only helped users with hearing issues, but also helped with searching and internationalization.

2008

The WCAG 2.0 guidelines were published and became a W3C recommendation in December 2008. WCAG 2.0 is organized under four main principles: perceivable, operable, understandable, and robust. Each principle has one or more guidelines under it that has benefits, examples, and test criteria.

Target Corporation was sued by the National Federation of the Blind (NFB) as its online retail store was not accessible to blind and visually impaired users. Target settled the lawsuit and paid $6 million. Part of the settlement was also to make the website more accessible to people with disabilities. This case set a legal precedent for private sector businesses about the accessibility of their websites.

2009

The Apple iPhone 3GS was introduced. Besides the touch screen that has been around since the beginning, it featured voice control which made it an even more accessible smartphone. The iPhone has proved to be a powerful assistive device for people with disabilities.

This column lists only some of the major accessibility milestones that have occurred since the inception of the World Wide Web. There are too many to have listed them all and as technology advances, there are sure to be many more to come!

Now and Future

Organizations are working on accessibility for people with disabilities that use Cloud computing.

This column shares information about accessibility requirements and techniques, and introduces standards and policies that might affect your products. If you have feedback, contact Linda Roberts at *lerober1@yahoo.com*.

FURTHER READING

WCAG 1.0, *www.w3.org/TR/WAI-WEBCONTENT/*

WCAG 2.0, *www.w3.org/TR/WCAG20/*

WAI history, *www.w3.org/WAI/history*

Target lawsuit, *http://arstechnica.com/uncategorized/2008/08/target-to-pay-6-million-to-settle-site-accessibility-suit/*

iPhone accessibility, *www.forbes.com/sites/sap/2013/08/12/assistive-technology-how-iphones-help-blind-people-see/*

Mark Your Calendar

Organization events across the globe

F.Y.I. lists information about nonprofit ventures only. Please send information to *intercom@stc.org.*

1 8–11 Oct
The **American Medical Writers Association (AMWA)** will hold its 74th annual conference, with a theme of "Shake, Rattle, and Write," at the Memphis Cook Convention Center in Memphis, TN. For more information, contact:
AMWA
+1 (301) 294-5303
amwa@amwa.org
www.amwa.org/events_annual_conference

2 13–15 Oct
The **IEEE Professional Communication Society (PCS)** hosts IPCC2014, Meeting Grounds: Lifelong Learning, from Classroom to Workplace, at Carnegie Mellon University in Pittsburgh, PA. For more information, contact:
IEEE PCS
http://pcs.ieee.org/ipcc2014/

3 26–29 Oct
The **Public Relations Society of America (PRSA)** hosts their international conference, "Leading the Way: A Fearless Future for PR," at the Washington Marriott Wardman Park Hotel in Washington, DC. For more information, contact:
PRSA
+1 (800) 350-0111
www.prsa.org/Conferences/InternationalConference/

4 27–31 Oct
The **Human Factors and Ergonomics Society (HFES)** will hold its 2014 international annual meeting at the Hyatt Regency Chicago in Chicago, IL. For more information, contact:
HFES
+1 (310) 394-1811
info@hfes.org
www.hfes.org/web/hfesmeetings/2014annualmeeting.html

5 31 Oct–4 Nov
The **American Society for Information Science and Technology (ASIS&T)** will hold its Annual Meeting, with a theme of "Connecting Collections, Cultures, and Communities," at the Sheraton Seattle Hotel, Seattle, WA. For more information, contact:
ASIS&T
asis@asis.org
www.asis.org/asist2014/

6 5–8 Nov
The **American Translators Association (ATA)** will hold its 55th annual conference at the Sheraton Chicago in Chicago, IL. For more information, contact:
ATA
+1 (703) 683-6100
ata@atanet.org
www.atanet.org/conf/2014

7 5–6 December
The **India Chapter of STC** will hold its 15th annual conference at the Vivanta by Taj hotel in Bangalore, India. For more information, contact:
STC India
www.stc-india.org/

* STC-related event

Robert K. Shnitzler (1918–2014)

BY EDWARD A. MALONE | *Senior Member*

BOB SHNITZLER WAS the last surviving member of the committee that organized the Boston-based Society of Technical Writers (STW) in 1953. He passed away on 1 May at the age of 95.

STW merged with the New York–based Association of Technical Writers and Editors (TWE) to form the Society of Technical Writers and Editors (STWE) in 1957. STWE, in turn, merged with the Los Angeles–based Technical Publishing Society (TPS) to form the Society of Technical Writers and Publishers (STWP) in 1960. STWP changed its name to STC in 1971.

Shnitzler was national president of STW when it merged with TWE. He later served on STWE's first Board of Directors (1958–1959), published articles in the *STWP Review*, and presented papers at the annual STW/STWE/STWP conferences.

Born on 22 December 1918, in Boston, MA, Robert Karl Shnitzler was the son of Julius Shnitzler (a machinist) and Jennie Avison Shnitzler, both of whom had emigrated from Russia before 1910.

Shnitzler attended Bridgewater State Teachers College, graduating in 1940 with a teaching degree in math and physics. He enlisted in the military in 1942 and trained at Harvard and MIT. He married Anne Finkelstein (his wife of 57 years) before shipping out in 1943. For the next few years, he served as a LORAN specialist on "godforsaken islands" off the coast of Australia.

After his discharge in 1946, Shnitzler returned to the Boston area and took a job as a technical writer at Raytheon Manufacturing Company. He transferred to American Machine and Foundry Corporation in 1950 and became publications section head a year later. He was working for Ultrasonic Corporation when he joined the effort to start STW.

Robert Shnitzler (standing) at work in the 1950s

I had the opportunity to interview him at his home in Canton, MA, in March 2009. He talked about the formation of STW and the subsequent merger with TWE.

"I heard somehow that Floyd Hickok [the founder of STW] was having a meeting of technical writers. He got a large room over at MIT, and we all went, and of course he explained he was interested in starting an association of technical writers. . . . There were 40 or 50 people there at the time, and I unfortunately opened my mouth a few times, so then when it came to selecting a group to go forward, I was one of the group."

The committee, including Shnitzler, selected the society's name and drafted a set of bylaws. Over the next two years, STW grew from a Boston-area association with "special members" from around the country to a national association with 12 local chapters.

"At first STW and TWE were fighting over who could collect the most people. And of course TWE was collecting much more than we were. One, because they had a larger area, and two, because Floyd Hickok didn't want anyone in STW except writers, editors, managers; I mean he didn't think that artists or production people or anybody else should be members. Whereas the New York group, they were collecting anyone who had a connection with a publications operation."

TWE approached STW about a possible merger in 1956. Although Hickok was opposed to the idea, most STW members realized that the future lay in unification. As STW president, Shnitzler announced the merger plan at a joint STW-TWE conference in late 1956 and supervised its implementation over the next 11 months. After the merger, he remained active in STWE and STWP and was eventually elected Associate Fellow.

Shnitzler continued to work at Ultrasonic as it went through several name changes, becoming Advance Industries in 1957 and Air Technology Corporation in 1961. He rose in position to vice president and director before he resigned in 1968.

In later years, Shnitzler worked as a staff engineer at Itek Corporation, a self-employed technical writing consultant, and a technical writer at Softech Inc. He was the first person to retire from Softech in 1984. Although he was writing software specifications, he did not use a computer. "Never had one; I always did pencil and paper.… But I knew enough about the back end of it to do the writing."

In the 1980s, STC awarded Shnitzler a plaque in honor of his contributions to STC history. The plaque was hanging on his wall when I visited him in 2009. Shnitzler also showed me a brochure advertising STW's first national convention in 1955. He was proud of the professional association he helped to create.

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